

## ***Cerapus ortei* (Corophioidea: Corophiidae) a new amphipod crustacean from the Caribbean coast of Costa Rica**

### ***Cerapus ortei* (Corophioidea: Corophiidae) una nueva especie de anfípodo de las costas del Caribe de Costa Rica**

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#### **Abstract**

*Cerapus ortei* n. sp. is described from the Caribbean coast of Costa Rica, where it constructs and inhabits non-permanent tubes. This species is characterized by a prominent rostrum, and by the constriction of the body between pereonites 2 and 3. It is further characterized by the shape of the palm of gnathopod 2, the absence of a recurved hook at the distoventral margin of the peduncle of uropod 1, and the telsonic ornamentations, which distinguish it from all other known species in the genus.

#### **Resumen**

Se describe el anfípodo *Cerapus ortei* n. sp. de las costas del Caribe de Costa Rica, donde vive introducido en tubos no permanentes construidos por este interesante animal. Dicha especie se caracteriza por presentar un largo rostro, el cuerpo con una constricción entre los segmentos 2 y 3 del pereión, la forma del gnatópodo 2, y las ornamentaciones telsónicas, lo cual la distingue de las restantes que se conocen dentro del género.

**Key words:** Crustacea, Amphipoda, Corophioidea, *Cerapus*, Central America.

**Palabras claves:** Crustacea, Amphipoda, Corophioidea, *Cerapus*, América Central.

## **INTRODUCTION**

The peracarid crustacean fauna from the Caribbean coast of Central America remains poorly documented. This new species was collected as part of a marine faunal inventory of Caribbean crustacean species. Prior to this study there were three species of *Cerapus* reported from the Gulf of Mexico and the Caribbean Sea; *Cerapus benthophilus* Thomas and Heard, 1979, *Cerapus cudjoe* Lowry and Thomas, 1991, and *Cerapus thomasi* Ortiz and Lemaitre, 1997. Terminology of setae on the mandibular palp follows that of LOWRY AND STODDART (1993).

### ***Cerapus ortei* new species**

(Figures 1-5)

**Type material:** Holotype, male "A", 2,1 mm, Punta Mona, Manzanillo, Costa Rica, 13 March, 2001; SCUBA diving, 25 m; Invertebrate Collection, Center for Marine Research, Havana University. Paratypes, male "B" 1,8 mm; unsexed specimen "C", in its original tube, both deposited together with the holotype.

**Etymology:** Named in honor of Dr. Jesús Ángel Ortea, who helped collect peracarid material for the present study.

**Diagnosis:** (Male) Antenna 1, peduncle 2,1 times as long as flagellum, flagellum 4-articulate. Antenna 2, flagellum 5-articulate, article 5 vestigial. Rostrum long and slightly curved downward, 0,33 times as long as peduncle of male antenna 1. Pereonite 1 without lateral keel, body constricted between pereonites 2 and 3; sternal keel rudimentary. Gnathopod 2, basis lacking anteroproximal clump of setae; carpus, anterodistal margin slightly expanded, palm subtransverse with tooth on base of propodus; propodus elongate, slightly curved, 4,4 times longer than broad, posterior border sinuous, dactyl 0,66 times as long as propodus. Pereopods 3-7, dactyl simple (not bifid). Pleopods 2 and 3, inner ramus half or less as long as outer. Uropod 1, distoventral margin lacking peduncular hook, margins evanescent.

**Description:** (Male) Head: anterior margin angular, extending beyond eyes at approximately a 30° angle, rostrum 0,33 times as long as antennal peduncle 1.

Antennae: Antennae 1 and 2, setae only on posterior margins of peduncle and flagellum; not covered in small scales. Antenna 1 more than half of body length; peduncular article 3 with a very slight brown band distally; flagellum 4-articulate, terminal article vestigial. Antenna 2 scarcely exceeding antenna 1; flagellum 5-articulate, terminal article vestigial.

Mouthparts: Epistome: convex.

Mandible: molar without flakes, weakly triturrative with 3 accessory spines; palp elongate and slender, article 2 shorter than 3, bearing 1 A2 and 1 B2 setae; article 3 with 3 F3, 3 E3 setae and 4 D3 setae. Left mandibular incisor with 5 teeth; lacinia mobilis bifid; molar, with ventrally rounded process. Right mandible incisor with 3 teeth; lacinia mobilis with 4 teeth.

Maxilla 1: Inner plate small, terminal seta absent; outer plate, apical margin with 5 thickened, chisel-like odontoid setae; palp article 1 unornamented, article 2 with 1 subapical seta and 5 thickened spine-like setae terminally.

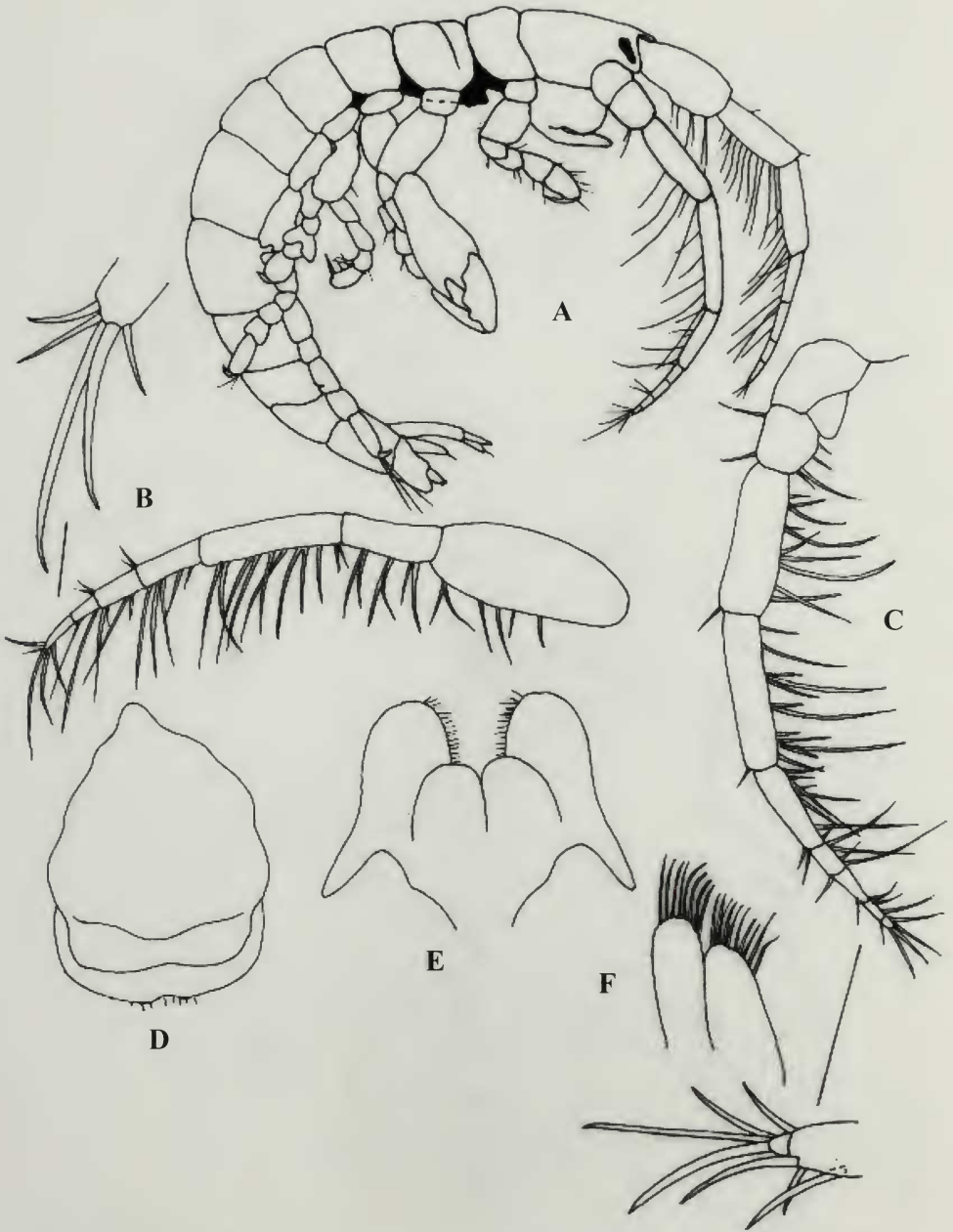
Maxilla 2: Inner plate with 10 apical setae; outer plate with 8 apical setae.

Maxilliped: inner plate rectangular, with 7 short apical spine-setae; outer plate, apical margin with 4 long setae and 2 odontoid setae; palp article 2 with 8 medial setae, article 3, medial margin with one long and 3 small setae, distal margin with 6 setae, article 4 bearing a distal seta.

Gnathopod 1: subchelate; coxa 1 quadrate; basis stout, margins subparallel; posterodistal margin of carpus forming a right-angle lobe; propodus with rounded oblique palm, palm setose; dactyl longer than palm.

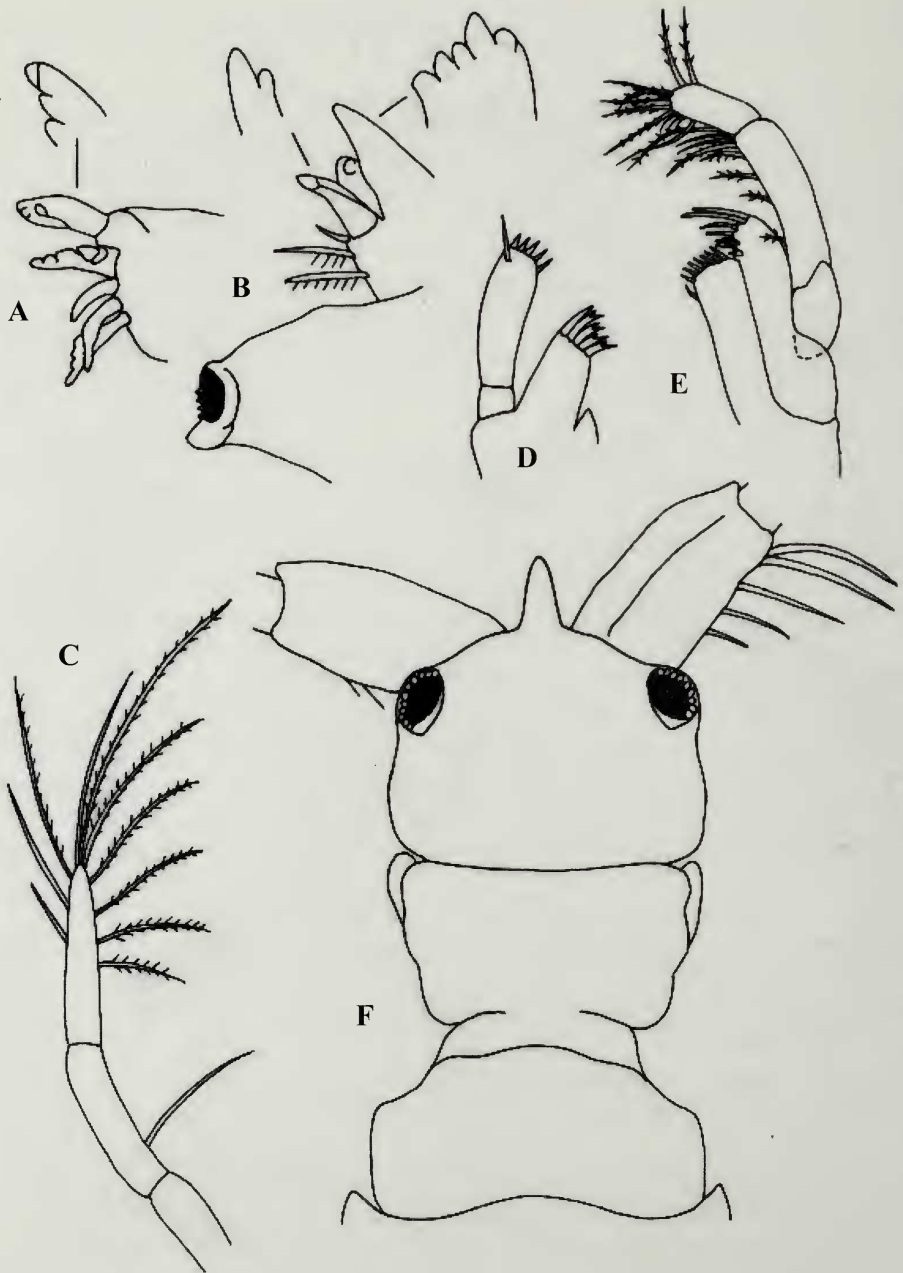
Gnathopod 2: complexly subchelate; coxa ovoid; basis rectangular, bearing 3 separated short setae on anteroproximal margin; carpus enlarged, 1.4 times longer than wide, palmar margin linear, angled obliquely forward, defined by elongate tooth bearing three subdistal setae; propodus elongate, 4,4 x times longer than wide, posterior margin sinuous with two small concavities; dactyl 0,70 x length of propodus.

Pereopods 3-4: coxae small, wider than deep, not touching serially; bases wide, 1,22 x and 2 x longer than wide respectively; remainder of pereopod narrow; merus forming rounded anterior lobe; dactyl with nail.

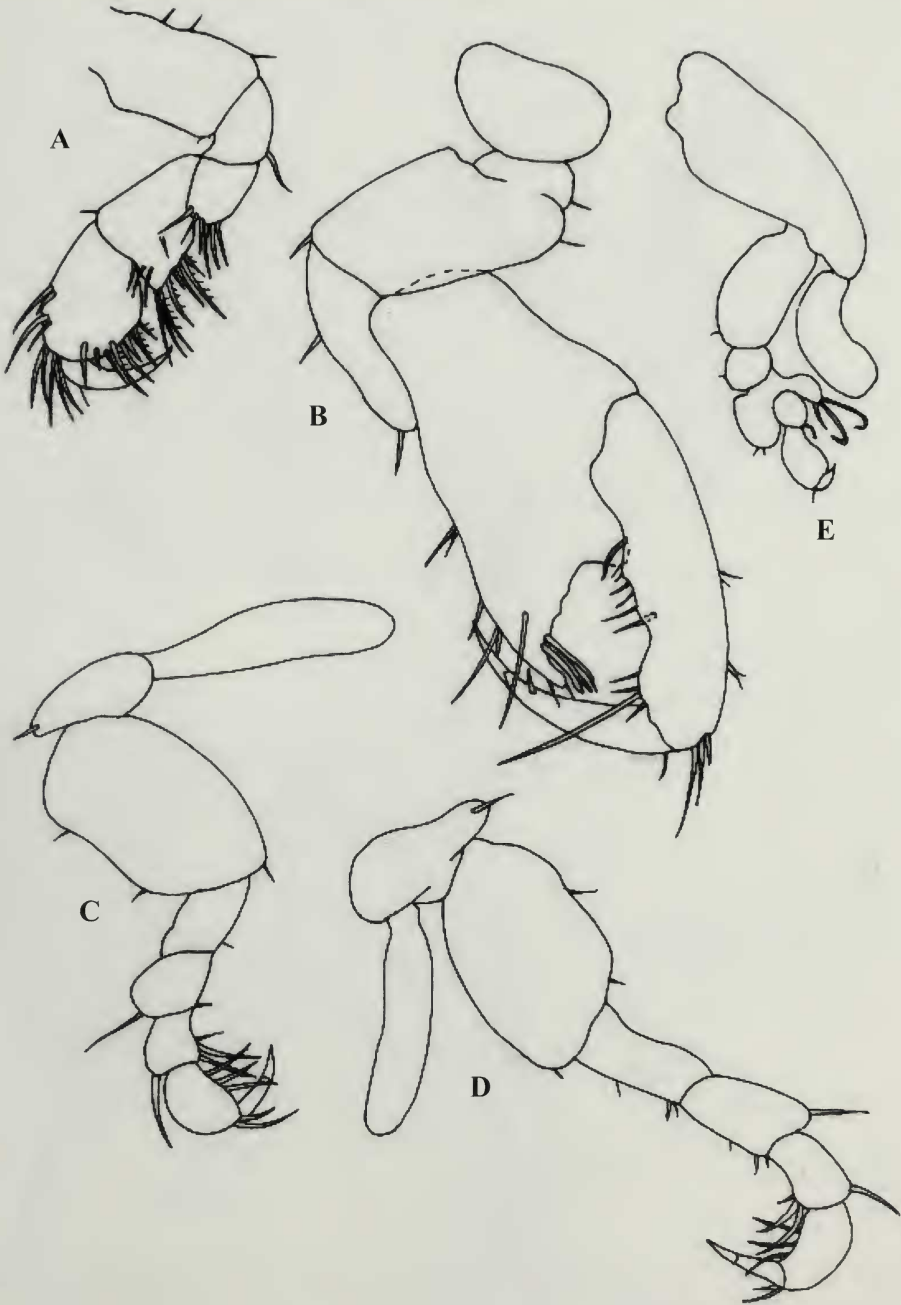


**Figure 1.** *Cerapus ortei*, new species, A, lateral view of paratype male "B"; holotype "A":  
 B, antenna 1; C, antenna 2; D, Upper lip; E, lower lip; F, maxilla 2.

**Figura 1.** *Cerapus ortei*, especie nueva, A, vista lateral del macho paratipo "B"; holotipo "A":  
 B, antena 1; C, antena 2; D, labio superior; E, labio inferior; F, maxilla 2.



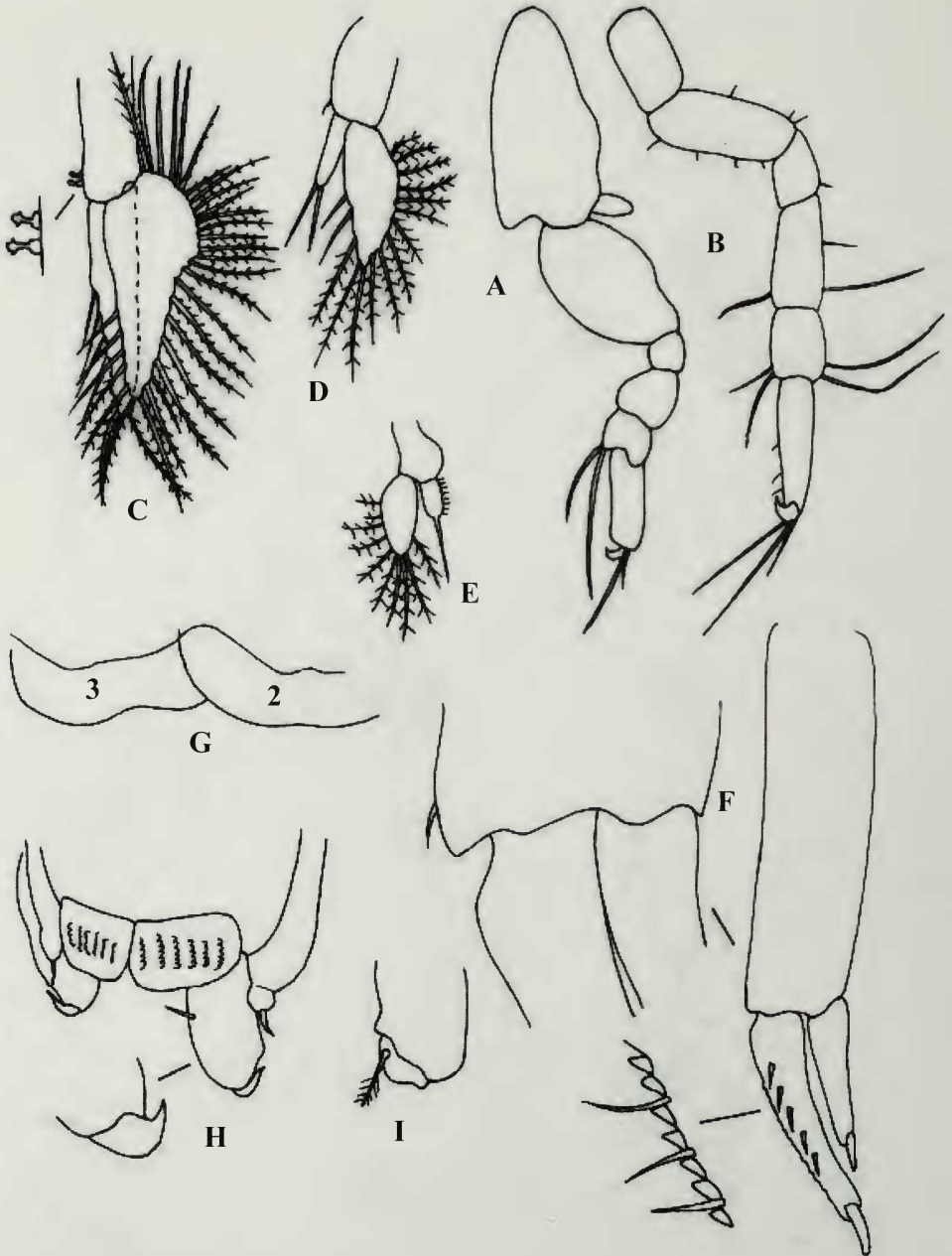
**Figure 2.** *Cerapus ortei*, new species, holotype "A": A, right mandible, incisor process; B, left mandible, incisor process and molar; C, mandible palp; D, maxilla 1; E, maxilliped; F, dorsal view of head and pereonites 1-2, paratype male "B".  
**Figura 2.** *Cerapus ortei*, especie nueva, holotipo "A": A, incisivo de la mandibula derecha; B, incisivo y molar de la mandibula izquierda; C, palpo mandibular; D, maxila 1; E, maxilipedo; F, vista dorsal de los segmentos pereonales 1-2 paratipo "B".



**Figure 3.** *Cerapus ortei*, new species, holotype "A": A, gnathopod 1; B, gnathopod 2; C, pereopod 3; D, pereopod 4; E, pereopod 5.

**Figura 3.** *Cerapus ortei*, especie nueva, holotipo "A": A, gnatópodo 1; B, gnatópodo 2; C, pereiópodo 3; D, pereiópodo 4; E, pereiópodo 5.





**Figure 4.** *Cerapus ortei*, new species, holotype "A": A, pereopod 6; B, pereopod 7; C, pleopod 1; D, pleopod 2; E, pleopod 3, F, uropod 1; G, epimera 2 and 3; H, uropods 2, 3 and telson (slightly turned); I, distal part of uropod 2.

**Figura 4.** *Cerapus ortei*, especie nueva, holotipo "A": A, pereiópodo 6; B, pereiópodo 7; C, pleópodo 1; D, pleópodo 2; E, pleópodo 3; F, urópodo 1; G, epímeros 2 y 3; H, urópodos 2, 3 y telson (ligeramente volteado); I, parte distal del urópodo 2.

Pereopod 5: shorter than 4; coxa elongate, 2,9 times wider than deep, anterior margin crenulate; merus bi-lobed, anterior lobe larger than posterior, with short setae ventrally, posterior lobe with 2 long, and 1 medium ventral setae.

Pereopod 6: coxa, anterior and ventral margins crenulate; basis ovoid; carpus with 2 long anterodistal setae.

Pereopod 7: coxa small and narrow, subrectangular, carpus slightly inflated distally; dactyls of pereopods 5-7 thickened and recurved.

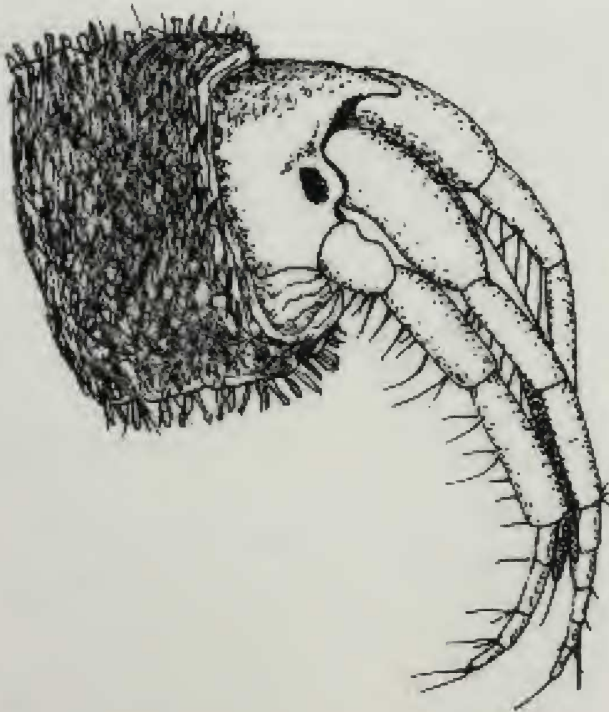
Pleopods: pleopods 1-3 decreasing in size serially, peduncles with 2 coupling spines; outer rami much larger than inner, expanded basally; pleopod 2, inner ramus more than half the length of outer; pleopod 3, inner ramus very small, bearing a very long terminal seta.

Uropods: uropod 1, peduncle 3,58 x longer than wide; outer ramus 1,72 x as long as peduncle, distoventral margin entire, lacking hook or other ornamentation; outer ramus 0,6 x of outer ramus, outer margin with row of 7 of denticles, dorsofacial surface with 5 setae. Uropod 2, uniramous, vestigial ramus bearing small distal setae. Uropod 3 uniramous, peduncle 2 times as long as broad, armed with a small distal hook.

Telson: 2,5 wider than long, cleft one-half of its length, each lobe with 6-7 longitudinal rows of very small, recurved tubercles.

Gills: present on pereopods 3-5 tubular and elongate that of 6 very short.

Female: unknown.



**Figure 5.**  
*Cerapus ortei*, new species  
paratype "C"  
unsexed specimen in tube.

**Figura 5.**  
*Cerapus ortei*, especie nueva  
paratipo "C"  
especimen sin sexar en su tubo.

**Observations:** Ecology: Tube cylindrical, entrance with slight distal flare; parchment-like, composed of fine particulate detrital material. Collected with *Gammaropsis atlantica* Stebbing, 8988, *Erichthonius brasiliensis* (Dana, 1853), and *Ampelisca* sp.

**Remarks:** The long rostrum of *C. ortei*, new species, distinguishes this species from all other known species of *Cerapus*. *C. ortei*, new species, differs from *C. benthophilus* by lacking a tuft of dense long setae on the anterior border of article 2 of gnathopod 2; and the simple dactyls on pereopods 3-7. It differs from both *C. thomasi* and *C. cudjoe*, in lacking a hook on the venterodistal margin of the peduncle of uropod 1; and further differs from *C. cudjoe* in the simple dactyls of pereopods 3-7.

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